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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/982,091A

DATE: 06/11/2002  
TIME: 15:54:20

Input Set : A:\CIT1320-1.ST25.txt

Output Set: N:\CRF3\06112002\I982091A.raw

2 <110> APPLICANT: CALIFORNIA INSTITUTE OF TECHNOLOGY  
 3 KUMAGAI, Akiko  
 4 DUNPHY, William  
 6 <120> TITLE OF INVENTION: CLASPIN PROTEINS AND METHODS OF USE THEREOF  
 8 <130> FILE REFERENCE: CIT1320-1  
 10 <140> CURRENT APPLICATION NUMBER: US 09/982,091A  
 C--> 11 <141> CURRENT FILING DATE: 2002-10-17  
 13 <150> PRIOR APPLICATION NUMBER: US 60/241,246  
 14 <151> PRIOR FILING DATE: 2000-10-17  
 16 <160> NUMBER OF SEQ ID NOS: 12  
 18 <170> SOFTWARE: PatentIn version 3.1  
 20 <210> SEQ ID NO: 1  
 21 <211> LENGTH: 4754  
 22 <212> TYPE: DNA  
 23 <213> ORGANISM: Xenopus laevis  
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 30 cagtctgaaa attgtggaga ctgattctga cagtgggtcaa ggcagctgtg aaatggctga 180  
 32 tcagaataaa ttattgggtt gtgtggagga taaagataca gatgatgaaa tcttggttcg 240  
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 36 gcgtaatttt gcagataatg taaaggggca ctctgataat gaggagaatg aggagactat 360  
 38 gtctgcttat agagaaaaac caagaaagat ccgttcagct gtattggaca gtgacaatag 420  
 40 tgatcatgag cttgatgttc aaataagtac aagtcaaaat gcagctgaaa tacctgagtc 480  
 42 agaactgat agcttgaga aggaaactca tactgtgaag cctaaaacaa gcaagtcctt 540  
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96 tagcctcatg ctgttcaagg acaattcttc aaagctagga gattcgctac ctgatgaaag 2160
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174 ggcaaacact gaaactataa gtttatggga gtgctggtta aaacaacaac ctattagtgc 4500
176 ttataatat aaaaattag gttattatat ggattgtttt taattaaaac aataagcaga 4560

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178 acaaatttaa aacaagtcct atttattttg ctcatgttaa ataaaagtgt atatatccat 4620
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189 <212> TYPE: PRT
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199 20 25 30
202 Cys Glu Met Ala Asp Gln Asn Lys Leu Leu Gly Cys Val Glu Asp Lys
203 35 40 45
206 Asp Thr Asp Asp Glu Ile Leu Val Arg Lys Lys Ser Lys Lys Lys Glu
207 50 55 60
210 Val Leu Val Asp Ser Asp Ser Asp Glu Glu Leu Glu Met Arg Asn Phe
211 65 70 75 80
214 Ala Asp Asn Val Lys Gly His Ser Asp Asn Glu Glu Asn Glu Glu Thr
215 85 90 95
218 Met Ser Ala Tyr Arg Glu Lys Pro Arg Lys Ile Arg Ser Ala Val Leu
219 100 105 110
222 Asp Ser Asp Asn Ser Asp His Glu Leu Asp Val Gln Ile Ser Thr Ser
223 115 120 125
226 Gln Asn Ala Ala Glu Ile Pro Glu Ser Glu His Asp Ser Leu Glu Lys
227 130 135 140
230 Glu Thr His Thr Val Lys Pro Lys Thr Ser Lys Ser Leu Lys Lys Gln
231 145 150 155 160
234 Thr Asp Thr Asn Lys Glu Glu Ile Val Lys Asn Lys Ser Lys Arg Lys
235 165 170 175
238 Ile Pro Lys Glu Lys Ile Lys Arg Arg Thr Lys Gln Lys Ser Lys Ala
239 180 185 190
242 Val Ala Glu Ala Arg Pro Asn Leu Asn Asp Ser Gly Cys Leu Leu Thr
243 195 200 205
246 Asp Gly Asp Leu Phe Asp Asn Gly Val Glu Asn Glu Met Asp Ser Asn
247 210 215 220
250 Glu Glu Glu Asp Ser Leu Glu Ala Ile Arg Ala Lys Met Lys Ser Lys
251 225 230 235 240
254 Leu Asn Ser His Ser Ala Glu Asn Phe Glu Asp Phe Glu Leu Asp Thr
255 245 250 255
258 Glu Gly Asn Gln Glu Ser Pro Glu Lys Arg Lys Glu Arg Lys Ala Ala
259 260 265 270
262 Arg Leu Gly Lys Glu Ala Met Lys Gln Met His Ser Glu Thr Gln Arg
263 275 280 285
266 Leu Ile Arg Glu Ser Ser Val Ser Leu Pro Tyr His Leu Pro Glu Pro
267 290 295 300
270 Lys Thr Ile His Asp Phe Phe Lys Arg Arg Pro Arg Pro Leu Cys Gln
271 305 310 315 320

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282 Phe Asp Tyr Val Ser Lys Glu Asp Leu Glu Ile Ser Pro Glu Gln Pro
283           355           360           365
286 Leu Leu Asn Thr Gln Cys Ser His Ala Ala Val Leu Cys Val Val Gln
287           370           375           380
290 Asn Asp Ala Arg Thr Glu Gly Leu Ser Lys Ser Thr Glu Ala Val Val
291 385           390           395           400
294 Thr Gly Gln Met Asn Asp His Glu Asp Ala Phe Ser Asp Ser Asn Ile
295           405           410           415
298 Val His Glu Gln Glu Thr Val Gly Leu Ile Thr Val Thr Glu Thr Phe
299           420           425           430
302 Gln Thr Pro Phe Ile Pro Gln Pro Glu Ser Val Val Cys Glu Gln Ile
303           435           440           445
306 Gln Asn Asp Val Val Glu Met Gln Arg Met Pro Glu Gln Pro Thr His
307           450           455           460
310 Lys Pro Lys Leu Ser Lys Leu Glu Lys Leu Lys Ala Leu Gly Val Asp
311 465           470           475           480
314 Leu Ser Ile Lys Pro Arg Leu Cys Pro Asp Asp Gly Ser Phe Val Asn
315           485           490           495
318 Leu Asp Glu Pro Lys Pro Asn Lys Glu Phe Glu Ala Leu Lys Glu Arg
319           500           505           510
322 Phe Leu Lys His Thr Leu Gln Lys Ser Lys Pro Arg Thr Glu Arg Lys
323           515           520           525
326 Val Asn Leu Asn Ile Ile Arg Lys Glu Thr Thr Ala Asp Gly Lys Glu
327           530           535           540
330 Glu Leu Lys Ala Asp Val Val Pro Ile Val Met Ala Thr Glu Lys Pro
331 545           550           555           560
334 Asp Lys Ser Ile Tyr Gln Lys Pro Gly Glu Lys Leu Gln Val Leu Lys
335           565           570           575
338 Val Lys Leu Gln Glu Ala Met Lys Ile Arg Arg Ser Glu Glu Arg Leu
339           580           585           590
342 Lys Arg Gln Ala Leu Tyr Lys Leu Asp Asn Glu Asp Gly Phe Glu Asp
343           595           600           605
346 Asp Glu Glu Glu Glu Glu Met Thr Glu Glu Ser Glu Asp Asp Gly Asp
347           610           615           620
350 Gly Asn Ala Glu Thr Ala Asp Tyr Pro Gly Gly Glu Asp Glu Glu Glu
351 625           630           635           640
354 Val Gly Asp Ala Glu Asp Asp Asn Asp Glu Asp Asp Thr Val Asn Asp
355           645           650           655
358 Arg Leu Leu Gly Asn Val Pro Glu Ile Val Ile Pro Leu Pro Arg Pro
359           660           665           670
362 Val Thr Thr Asp Ser Ser Leu Met Leu Phe Lys Asp Asn Ser Ser Lys
363           675           680           685
366 Leu Gly Asp Ser Leu Pro Asp Glu Ser Gly Cys Lys Arg Ser Ser Arg
367           690           695           700
370 Leu Glu Tyr Glu Glu Asp Ser Leu Leu Pro Gln Leu Lys Glu Asn Ser

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371 705          710          715          720
374 His Asn Ser Ser Phe Glu Leu Ile Ser Ser Met Ile Pro Ser Tyr Gln
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379          740          745          750
382 Phe Arg Ser Pro Ser Pro Val His Phe Lys Thr Ser Phe Leu Ser Ser
383          755          760          765
386 Ala Ser Lys Ser Ser Gly Lys Met Ser Glu Pro Ser Leu Pro Val Glu
387          770          775          780
390 Asp Ser Gln Asp Leu Tyr Asn Ala Ser Pro Glu Pro Lys Ala Ser Tyr
391 785          790          795          800
394 Leu Cys Ala Gly Arg Asn Ser Gln Phe Gln Phe Ser Leu Glu Asp Asp
395          805          810          815
398 Thr Gln Ser Gln Leu Leu Asp Ala Asp Gly Phe Leu Asn Val Gly Arg
399          820          825          830
402 His Lys Ser Ser Ser Ala Lys His Arg Leu Ala Leu Asp Thr Met Asp
403          835          840          845
406 Glu Asn Ala Met Asp Ala Asn Met Asp Glu Leu Leu Asp Leu Cys Ser
407          850          855          860
410 Gly Gln Phe Lys Glu Ser Leu Ser Gly Thr Ser Gln Ala Ala Glu Ser
411 865          870          875          880
414 Asp Ala Lys Lys Gln Pro Met Asp Glu Leu Glu Leu Cys Ser Gly
415          885          890          895
418 Lys Phe Val Ser Gln Ala Asp Cys Ser Thr Gln Asp Ser Ser Ala Ser
419          900          905          910
422 Ala Lys Asp Arg Ser Thr Ala Val Lys Lys Asp Ile Ser Asp Glu Val
423          915          920          925
426 Ala Thr Val Ser Ser Ser Phe Leu Thr Glu Arg Glu Gln Glu Glu Asp
427          930          935          940
430 Glu Glu Glu Glu Phe Gly Glu Phe Lys Leu Leu Pro Cys Asp Asp Ser
431 945          950          955          960
434 Glu Ser Glu Asn Glu Glu Gln Asn Glu Glu Glu Glu Glu Glu Asp
435          965          970          975
438 Ala Lys Asp Asp Glu Asp Glu Glu Glu Ile Leu Gln Lys Gln Lys
439          980          985          990
442 Arg Lys Leu Arg Leu Asn Asp Phe Met Glu Asp Glu Ala Glu Leu Ser
443          995          1000          1005
446 Gly Ser Asp Val Gly Ser Gly Asp Glu Tyr Glu Gly Asp Asp Asp
447          1010          1015          1020
450 Glu Tyr Glu Glu Glu Ala Ile Asp Glu Asp Leu Pro Ser Asp Glu
451          1025          1030          1035
454 Glu Leu Gln Asp Gln Val Asn Lys Ile His Met Lys Val Thr Met
455          1040          1045          1050
458 Asp Glu Asp Gln Arg Gln Leu Arg Phe Tyr Gln Glu Arg Tyr Leu
459          1055          1060          1065
462 Ala Asp Gly Asp Leu His Ser Asp Gly Pro Gly Arg Thr Arg Lys
463          1070          1075          1080
466 Phe Arg Trp Lys His Leu Asp Asp Ala Ser Gln Val Asp Met Phe
467          1085          1090          1095

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RAW SEQUENCE LISTING ERROR SUMMARY  
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:8; Xaa Pos. 1,5,13  
Seq#:9; N Pos. 3,9,15,21,24,27,30  
Seq#:10; N Pos. 3,9,15,21,27,30

VERIFICATION SUMMARY

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L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:3047 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0  
L:3065 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0  
L:3082 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0